

1. CONDUCTOR

Material:
 Silicone Blocked Tin Plated Copper (SBT) or
 Silicone Blocked Bare Copper (SBB)
 Construction: See Table 1
 Diameter: See Table 1

2. INSULATION

Material: Cross-linked Fluoroelastomer, J5
 Wall Thickness: See Table 1
 Diameter: See Table 1
 Color Standard: SAE or Judd

3. PHYSICAL CHARACTERISTICS

Temperature Rating: 150 °C
 Voltage Rating: 60 V
 Weight: See Table 1

4. PERFORMANCE PROPERTIES (SAE J1128)

Mechanical

Minimum Bend Radius (Industry Standard Calculation) See Table 2
 Tensile Strength
 Unaged 10 MPa, min.
 Aged (168 hr @ 180 °C) 80% retention, min.
 Elongation
 Unaged 150%, min.
 Aged (168 hr @ 180 °C) 50% retention, min.
 Cross-linking Core Not Visible
 Strip Force (50 mm Slug @ 50 mm/min) See Table 2
 Abrasion Resistance
 Additional Mass See Table 2
 Sandpaper Length 150 mm, min.
 Pinch Resistance See Table 2
 Shrinkage None Allowed

Thermal

Flame Resistance 30 s burn, max.
 Cold Bend No Cracks or Splits, Pass Dielectric Test

Electrical

Max. DCR @ 20 °C See Table 1
 Dielectric Test 1000 V, 60 Hz, 60 s
 Spark Test 2500 V_{ac}

Chemical

Ozone Resistance No Cracks or Splits
 Fluid Compatibility Outside Diameter Change, max.
 Engine Oil (IRM 902) 15%
 Gasoline (Ref. Fuel C) 15%
 Ethanol / Ref. Fuel C Mixture 15%
 Diesel Fuel 15%
 Power Steering (IRM 903) 30%
 Auto Trans. (Dexron VI) 25%
 Engine Coolant 50/50 15%
 Battery Acid (Sp. Gr. ~ 1.26) 5%

ADDITIONAL PERFORMANCE PROPERTIES (Ctnd.)

Accelerated Life in ATF

Place five 150 mm samples in ATF (Dexron VI) for 720 hr at 150 °C.
 Outside Diameter Change < 20%
 1X mandrel wrap No cracks or deterioration
 Dielectric Test No Breakdown
 Pinch Resistance > 11 N

Anticapillary Action

Test 1

Fill 6 test tubes to 25 mm with ATF (Dexron VI). From the sample, cut 6 specimens to 142 mm with 10 mm stripped on each end and place a specimen in each tube with the stripped-end submerged. Connect one end of each specimen to a vacuum and apply a vacuum of 100 mm Hg to each specimen for 1 hr. (See Figure 1). Remove each specimen and allow it to dry. After the outside of the specimens are dry, slice off insulation for evidence of wicking up the conductor and/or inside surface of the insulation.
 Fluid shall not travel up the conductor more than 20 mm.

Test 2 (Initial Qualification Only)

Condition the cable 48 hr @ 165 °C prior to performing Test 1.

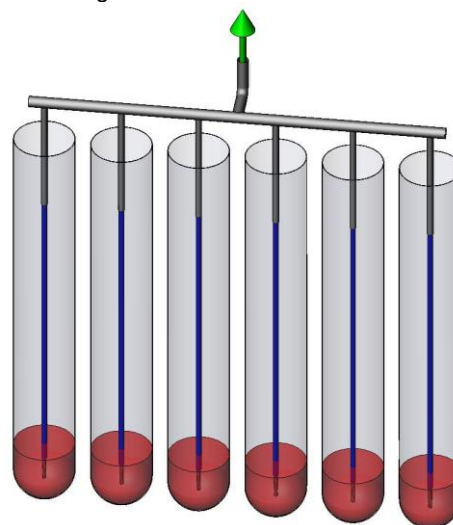


Figure 1: Anticapillary Test Set-up

5. PROCEDURAL REFERENCE SPECIFICATION SAE J1128



JUDD WIRE INC.
 124 Turnpike Road
 Turners Falls, MA 01376
 (413) 863-4357

Date	Rev	By	Appr'd	ECN	Description:	Specification Number:	Page:
05/18/05	--	EJK	GBM	--	HOOKUP, TXL, XLFE, 150°C, 60V, SILBLK, J5, TRANSMISSION	JW1067-05	1 of 2
11/26/18	M	MJM	RMB	18-1946			
01/11/19	N	MJM	RMB	19-1953			

Table 1 – Dimensions

Conductor				Insulation						
ISO Conductor Size		Material	Strands	Strand Diameter	DCR		Wall Thickness		Cable Outside Diameter	Weight
Size	Diameter			Nom.	Max.	Min.	Nom.	Nom.		
(mm ²)	(mm)			(Number)	(mm)	(mΩ/m)	(mm)	(mm)	(mm)	(kg/km)
0.35	0.90	SBT	7	0.25	54.4	0.28	0.40	1.55 ± 0.15	5.95	
0.35	0.90	SBB	7	0.25	54.4	0.28	0.40	1.55 ± 0.15	5.90	
0.35	0.90	SBT	19	0.15	55.5	0.28	0.40	1.55 ± 0.15	6.34	
0.50	1.10	SBT	7	0.31	32.2	0.28	0.40	1.72 ± 0.15	7.99	
0.50	1.10	SBB	7	0.31	31.8	0.28	0.40	1.72 ± 0.15	7.82	
0.50	1.10	SBT	19	0.19	32.2	0.28	0.40	1.72 ± 0.15	8.45	
0.50	1.10	SBB	19	0.19	34.8	0.28	0.40	1.72 ± 0.15	7.57	
0.80	1.30	SBT	19	0.25	24.9	0.28	0.40	2.04 ± 0.15	12.5	
0.80	1.30	SBB	19	0.25	19.6	0.28	0.40	2.04 ± 0.15	12.7	
1.00	1.50	SBT	19	0.27	15.3	0.28	0.40	2.17 ± 0.20	15.6	
1.00	1.50	SBB	19	0.27	15.3	0.28	0.40	2.17 ± 0.20	15.6	
2.00	2.00	SBT	19	0.36	9.76	0.28	0.40	2.50 ± 0.20	23.0	
2.00	2.00	SBB	19	0.36	9.20	0.28	0.40	2.50 ± 0.20	22.8	
3.00	2.40	SBT	19	0.45	6.36	0.32	0.46	3.10 ± 0.20	34.5	

Table 2 – Performance Properties

ISO Conductor Size	Additional Mass for Abrasion Resistance	Pinch Resistance Min.	Strip Force		Minimum Bend Radius	
			Min.	Max.	Secured Mount	Unsecured Mount
(mm ²)	(kg)	(kg)	(N)	(N)	(mm)	(mm)
0.35	0.22	1.7	4	36	6.2	12.4
0.50	0.45	2.5	9	44	6.9	13.8
0.80	0.45	3.6	9	44	8.2	16.4
1.00	0.45	3.6	9	44	8.7	17.4
2.00	0.45	3.6	13	49	10.3	20.6
3.00	0.45	3.6	18	53	12.4	24.8



JUDD WIRE INC.
124 Turnpike Road
Turners Falls, MA 01376
(413) 863-4357

Description:

**HOOKUP, TXL, XLFE, 150°C, 60V,
SILBLK, J5, TRANSMISSION**

Specification Number:

JW1067-05

Rev:
NPage:
2 of 2